Table of Contents:

YAMAHA MOTOR CORPORATION, U. S. A.
6555 KATELLA AVENUE • CYPRESS • CALIFORNIA • 90630 • 714-761-7300 • FAX 714-229-7944

June 17, 2019

Director, Certification Division
Mobile Source Air Pollution Control
US EPA
2565 Plymouth Rd.
Ann Arbor, MI. 48105

Dear Director:

Please find enclosed model year 2020 application for Yamaha's On Road Motorcycle family LYMXC.998GEL.

Per 40 CFR86.437-78 (a)(1) I hereby state that the test vehicles with respect to which data are submitted have been tested in accordance with the applicable test procedures, that they meet the requirements of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this part.

If such statements cannot be made with respect to any vehicle tested, the vehicle shall be identified, and all pertinent test data relating thereto shall be supplied.

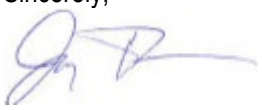
Further, I hereby state that production motorcycles are identical in all material respects to the motorcycles tested and described in the application for certification. These motorcycles do not have adjustable parameters.

Additionally, I hereby state that the 'Emission Control Information Label' is permanently affixed to the vehicle during the production process.

As Yamaha's representative for EPA matters, I can be reached at:

Yamaha Motor Corporation U.S.A.
6555 Katella Ave.
Cypress, CA 90630-5101
Phone: 714-761-7754
Fax: 714-229-7944

Sincerely,



Jay Tanner
Senior Certification Specialist
Government Relations and Certification Division

Print Form

On-Highway Motorcycle Certificate Review Sheet - March 7, 2005

☒ **Certificate will be issued to:** YAMAHA MOTOR CORPORATION USA **Model Year** 2020
(Must be a U.S. manufacturer or U.S. importer/distributor)
Engine Family LYMXC.998GEL **Evaporative Family** LYMXPMETALF5
☐ **California Only** **CARB Executive Order Number** N/A

Small Volume: ☐ **<10,000 Sales;**
Small Volume: ☐ **<3,000 Sales and < 500 Worldwide Employees of the OEM & their U.S. Importers)**
Motorcycle Class: ☐ **I-A (0-49cc)** ☐ **I-B (50-169cc)** ☐ **II (170-279cc)** ☒ **III (280cc & up)**

Motorcycles are produced by YAMAHA MOTOR CO. LTD. **(Identify the OEM)**
Motorcycles are produced at IWATA, JAPAN **(Location of OEM Plant(s)**

Models to be listed on Certificate: YZFR1LL, YZFR1LB, YZFR1LCL, YZFR1LCB, YZFR1ML, YZFR1MLC

Comments: _____

1. **New Mfr/Importers only: Send letter to EPA describing your company's plans; request an initial EPA guidance package. Is this the first Certificate issued to your company?** ☐ **Yes;** ☐ **No.**

2. **New manufacturers or new U.S. importers of foreign motorcycles must obtain an EPA assigned manufacturer (or importer) codes;** See www.epa.gov/otaq/cfeis.htm.

3. **Group vehicles into engine families;** ref 40CFR 86.420-78, EPA guidance letters CCD-04-01, Feb. 11, 2004, and VPCD-96-12, Dec. 3, 1996; available at http://epa.gov/otaq/cert/dearmfr/dearmfr.htm.

4. **Select test vehicle(s); ref 40 CFR 86.418 to 86.423. Number of test vehicles for this family** _____

5. **Locate a test laboratory capable of performing EPA tests;** ref. www.epa.gov/otaq/consumer/lablist.pdf .
Laboratory where exhaust tests were performed: YAMAHA MOTOR CO. LTD.
Laboratory where permeation tests were performed (if applicable): SEE CSI

6. **Perform mileage accumulation and exhaust testing.** Ref. 40 CFR 86.426-78 to 86.430-78.
   - ☒ Full Mileage accumulation (1/2 of useful life mileage for the class of motorcycle)
   - ☐ Requested EPA approval to accumulate 5000 total miles (total annual sales < 300 units)
   - ☐ Performed 4 exhaust tests or more; ref. 40 CFR 86.427-78. .
   - ☐ 0-50cc: Modified test cycle used. Ungoverned Top speed _____ (must be <36.5mph)

7. **Perform evaporative and/or permeation tests;** Ref. 40 CFR 86.410(g) and 40 CFR 1051, Subpart F.
   - ☐ Yes; ☐ No: Performed evaporative testing as required by California regulations
   - ☒ Yes; ☐ No: Performed EPA permeation tests of fuel tank and fuel hoses; ref 40 CFR 1051.501 & 515.

8. **EPA Confirmatory Testing:** If selected for confirmatory testing, must provide vehicle to EPA's Ann Arbor, Michigan laboratory or another EPA-designated laboratory; ref 40 CFR 86.434-78.
   ☐ **Tested at EPA laboratory or an EPA-designated laboratory;** ☐ **Waived by EPA**

9. **Submit fee payment & fee filing form;** See CCD-04-14, July 2, 2004; ref www.epa.gov/otaq/fee.htm.
   ☒ **Full Fee Paid: Amount Paid** $1852.00 **;**

9. (continued) ☐ **Reduced Fee: Amount Paid_____;**
Number of vehicles paid for_____; Total retail value of all vehicles paid for $_____
☐ **Copy of fee filing form & basis for reduced fees in application. (Do not send a copy of check.)**

10. Application for certification: Submit the completed application to EPA, preferably on CD; ref 40 CFR 86.416-80, 86.438-78, and 86.439-78:

☒ **Application follows EPA's recommended application format;** ref. EPA 3/9/05 workshop
☐ **Application includes electronic & paper copy of CSI (Certification Summary Information)**

The application contains:

☐ A description of the manufacturing and assembly process;
☐ A copy of the agreement between the manufacturer and importer (imported motorcycles only);
☒ Description of vehicles covered by the certificate (vehicle, engine, transmission parameters, etc);
☒ Name and address of the original vehicle manufacturer;
☒ Name and address of the original engine manufacturer;
☒ A detailed description of catalytic converter(s) and emission-related components;
☒ A detailed description of carburetor or fuel injection (manufacturer, model number, etc);
☒ Part numbers of carburetor/fuel injection, catalysts, and emission-related components for all Federal and California models covered by the certificate;
☒ Test data including description of test vehicle(s), emission data & maintenance log;
☐ Email & paper copy of EPA excel files: Engine Family & Test Information Sheets; (not required if CSI provided to EPA)
☒ A statement of compliance as required by 40 CFR 86.437-78(a)(1) or (b)(ii); and
☒ A statement that production motorcycles are identical in all material respects to the motorcycles tested and described in the application for certification.

Emission Control Information Label; ref. 40 CFR 86.413-78:

☒ Actual label or a copy of the actual label is included in the application;
☒ Location where the label will be affixed to motorcycle is included in the application;
☒ Label contains company name & trademark of the certificate holder;
☒ Label contains company name of OEM (EPA recommendation for imported motorcycles)
☒ Label is permanent (can't be peeled off);
☒ Label contains HC+NOx FELs (required if engine family is certified to FELs); and
☒ Label is affixed to motorcycle during production (before going thru U.S. Customs for imports)

Warranty, maintenance instructions, and owner's manuals:

☐ Actual warranty booklet & owners manual provided to EPA; (40 CFR 86.411; 86.412); or
☒ Warranty text & maintenance provided (warranty & owners manuals will be provided later)
☒ Emissions warranty coverage meets minimum Clean Air Act Requirements as follows:

☐ 5 years/ 6,000 km (Class I-A) ☐ 5 years/ 18,000 km (Class II)
☐ 5 years/ 12,000 km (Class I-B) ☒ 5 years/ 30,000 km (Class III)

11. Agreement between importer and a foreign motorcycle manufacturer: The application shall include a letter from the OEM to EPA (on the OEM's letterhead & signed by a vice president or higher) authorizing the applicant to import and distribute motorcycles in the U.S. The agreement shall include the following:

Complete identification of the OEM. Include all company names, aliases, subsidiary companies, parent companies and subcontractors associated with the manufacturer of motorcycles. Provide a brief history of the OEM, number of years the OEM has been in business, the official OEM website; the number and location of all manufacturing plants, the number of employees. Provide the name address, telephone number and email address of key personnel including plant manager(s). Provide a complete list of motorcycles, ATVs, non-road engines, on-road engines and other products manufactured by the OEM (identified by make, model and engine).

☐ **Identify all entities authorized to import your motorcycles/engines into the U.S.** Provide the number of motorcycles and engines (identified by make, model, engine size, engine type) which are 1) produced annually by OEM; and 2) imported into the U.S. (including models imported by other entities).

☐ **Authorize the applicant to import your products.** Completely identify applicant (importer who will be issued a certificate). Include all company names, aliases, subsidiary companies, parent companies and subcontractors associated with the importation of motorcycles. Provide a brief history of the Importer, number of years the Importer has been in business, the official Importer website; the number and location of all Importer offices and employees. Provide the name, address, telephone number & email address of key Importer personnel.

☐ **Identify the Importer/Certificate Holder's obligations to the OEM.**

☐ **Identify the OEM's obligations to the Importer/Certificate Holder.**

☒ **Identify the models which the applicant is authorized to import:** Provide a complete list of motorcycle models, engines and other emission-regulated products authorized to be imported by the Importer (identified by nameplate, make, model, engine size, engine type and the quantity imported). Include vehicles and engines in this and other engine families intended for certification during the model year. Indicate whether such vehicles and engines will comply with U.S. emission requirements when they leave the OEM factory.

☒ **Assure that "Service of Process" is provided.** Provide the name and contact information of a cognizant representative of the manufacturer (normally the importer/certificate holder) who EPA can contact for emission compliance, warranty and other issues. Identify who will be responsible for supplying parts, service, and warranty service to customers. Outline who will be responsible to establish a dealer network, provide service information and provide training to dealer service personnel. Describe how customer feedback will be provided from customers and dealers to the importer and to the manufacturer. Describe how the certificate holder (the importer) will be made aware of all emission-related running changes made to production motorcycles & engines.

☐ **EPA only: Agreement was reviewed by:** _____

12. On-Highway Motorcycle Emission Standards; ref. 40 CFR 86.410-90, 86.410-2006:

☐ **Tier 0: 5 g/km HC, 12 g/km CO [1978-2005 model year vehicles]**

☐ **Tier 1 Class I-A, Class I-B and Class II [2006 and later model year vehicles]:**
- ☐ 1.0 g/km HC, 12.0 g/km CO; or
- ☐ 1.4 g/km HC+NOx or a FEL of _____g/km HC+NOx; 12.0 g/km CO;
  Note: Family Emission Limit (FEL) must be ≤ 5.0 g/km HC+NOx

☐ **Tier 1 Class III [2006-2009; or 2008$^+$ for small volume (<3000 sales and <500 employees)]:**
- ☐ 1.4 g/km HC+NOx or a FEL of _____g/km HC+NOx; 12.0 g/km CO
  Note: Family Emission Limit (FEL) must be ≤ 5.0 g/km HC+NOx

☒ **Tier 2: [Class III only; 2010$^+$ model year vehicles]:**
- ☐ 0.8 g/km HC+NOx or a FEL of _____g/km HC+NOx; 12.0 g/km CO
  Notes: Tier 2 is only applicable to large volume (≥3000 sales and ≥500 employees).
  Family Emission Limit (FEL) must be ≤ 2.5 g/km HC+NOx.

☒ **Test vehicle(s) passed all applicable exhaust emission standards**

☐ **Small Volume Hardship Provisions approved (1 year grace period);** ref 86.446-2006, 447-2006

Comments: _____

13. Permeation Standards: [2008$^+$ or 2010$^+$ for small volume (<3000 sales and <500 employees)]:

☒ **Tested to demonstrate compliance with Class I-A, I-B, II, III standards**, ref. 86.1051.245:
Fuel Tank: 1.5 g/m^2/day or _____ g/m^2/day FEL; and
Fuel Hoses: 15 g/m^2/day

☒ **Test vehicle(s) passed all applicable emission standards**

☐ **Certified by Design; ref. 40 CFR 86.1051.245(e):**

Fuel Tank: ☐ Metal Tank with low permeability seals and gaskets; or
☐ Metal Tank with gasket exposed surface area of 1000 mm^2 or less

Fuel Hoses: ☐ All hoses meet Category 1 permeation specifications in SAE J2260
☐ All hoses meet R11-A or R12 permeation specifications in SAE J30

☐ **Small Volume Hardship Provisions approved (1 year grace period);** ref 86.446, 86.447

Comments: _____

_____

14. Additional Requirements if Using FELs:

☒ **HC+NOx Averaging Provisions are used for this engine family;** ref. 40CFR 86.449

☐ Application includes Preliminary Corporate Average HC+NOx calculations.

Preliminary Class I/II Corporate Average HC+NOx: _____ g/km

If projecting a deficit, source of (Class III) offsetting credits: _____

Preliminary Class III Corporate Average HC+NOx: 0.5822 g/km

If projecting a Tier 2 deficit, source of (early Tier2) offsetting credits: _____

☐ Yes or ☐ No: Class III credits will be used in Class I/II Corporate Average.

☐ Application includes the statements required by 40CFR 86.449(f)(1) and (h):

(f)(1) The corporate average HC+NOx emission level will be below the standard for all classes of motorcycles; and (h) Certifying the accuracy of HC+NOx calculations.

☐ Agree to send EPA an end-of-year report within 120 days after model year ends; ref. 86.449.

☐ **HC+NOx Early Tier 2 Banking Provisions are used for this engine family (Class III only)**

☐ FEL for this family is less than .8g/km HC+NOx as required by 40 CFR 86.449(j)

☐ Assigned a FEL of .8g/km HC+NOx to this family for Tier 1 corporate average calculations

☐ **HC+NOx FELs are being revised for this family before the model year ends**

☐ FEL Raised: Must recalculate preliminary average & make new compliance statements.

☐ FEL Lowered: Must supply supporting data (e.g. production data from 2-3 vehicles).

☐ **Fuel Tank Permeation Averaging used for this evaporative family;** 86.410(g), 86.1051 SubpartH:

(Fuel tank permeation FELs for evaporative families cannot be revised before the model year ends)

☐ Metal tanks are excluded from averaging calculations (as required by 40 CFR 410-2006(g))

☐ Application includes Preliminary Corporate Average Permeation calculations.

Preliminary Corporate Average fuel tank permeations: _____ $g/m^2/day$

If projecting a deficit, source of offsetting credits: _____

[Fuel tank deficits are allowed thru 2010, only. Deficits must be eliminated by the end of 2011. ABT not allowed between hwy motorcycles and off-hwy-motorcycles/ATVs; ref 86.449-(g).]

☐ Agree to send EPA an end-of-year report within 90 days after the model year ends and a final report within 270 days after model year ends; ref. 1051.730(a).

☐ **Fuel Tank Permeation Early Banking Provisions used for this family**

(Allowed prior to 2008 for large volume mfrs; prior to 2010 for small volume mfrs)

☐ FEL for this family is 3.0 $g/m^2/day$ as required by 40 CFR 86.1051.145(g).

Comments: SEE CSI

_____

15. Obtain an EPA Certificate of Conformity; ref 40 CFR 86.437-78.
16. Build vehicles to certified specifications (identical to application for certification).
17. Affix emission label to each vehicle produced during the production process per 86.413-78(a)(1).
18. Supply customers with parts, service, owner's manuals, warranty, etc.
19. Send end-of year report to EPA within 120 days after model year ends (if using FELs), per 86.449(g).
20. Submit defect reports, voluntary emission-related recall reports to EPA, ref. 40 CFR 85.1901-1904.

I certify that to the best of my knowledge the above statements are true:

Applicant's Signature: Jay Tanner **Date:** 6/17/19

EPA: Certificate Reviewed by : _____ Date: _____

An official email of the United States government

Pay.gov

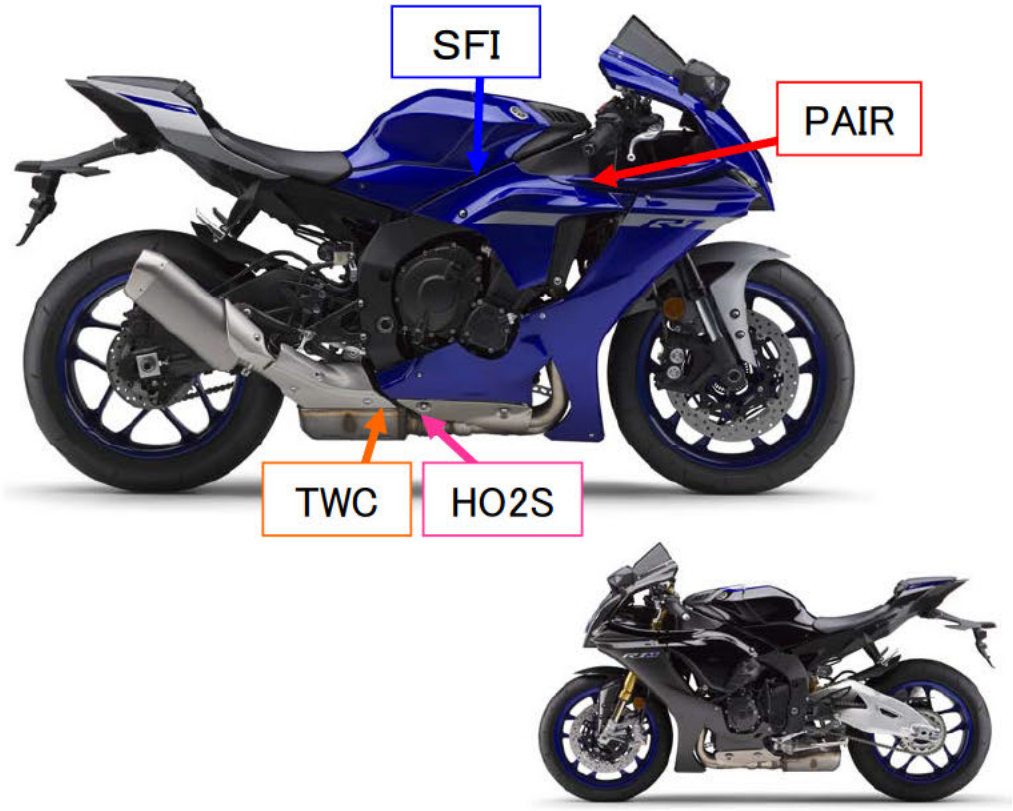
Your payment has been submitted to Pay.gov and the details are below. If you have any questions regarding this payment, please contact Laura Collier at (202) 564-7593 or collier.laura@epa.gov.

Application Name: Motor Vehicle and Engine Compliance Program Fees
Pay.gov Tracking ID: 26I502N5
Agency Tracking ID: 75771168143
Transaction Type: Sale
Transaction Date: 06/14/2019 01:16:04 PM EDT
Account Holder Name: Linda Fox
Transaction Amount: $1,852.00
Card Type: Visa
Card Number: **********0416

Engine Family: LYMXC.998GEL
ICI VIN Number:
Process Code: New

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

MODEL	COLOR
YZFR1LL	DEEP PURPLISH BLUE METALLIC
YZFR1LB	BLACK METALLIC
YZFR1LCL	DEEP PURPLISH BLUE METALLIC Cal model
YZFR1LCB	BLACK METALLIC Cal model
YZFR1ML	BLUISH WHITE METALLIC
YZFR1MLC	BLUISH WHITE METALLIC Cal model



Manufacturer : YAMAHA MOTOR CO., LTD.

Emission control system : TWC (two TWCs in between exhaust-pipe and muffler)
SFI (eight SFIs on intake manifolds)
HO2S (two HO2Ss on exhaust pipe)
PAIR (one PAIR on upper of engine)

Displacement : 998 cm^3

VIN: JYARN66E*LAxxxxxx (YZFR1LL; YZFR1LB 49 states model)
JYARN66Y*LAxxxxxx (YZFR1LCL; YZFR1LCB California state model)
JYARN67E*LAxxxxxx (YZFR1ML 49 states model)
JYARN67Y*LAxxxxxx (YZFR1MLC California state model)

Model is indicated by the 4^{th} –7^{th} character.

VEHICLE EMISSION LABEL INFORMATION

Manufacturer: YAMAHA MOTOR CO., LTD.

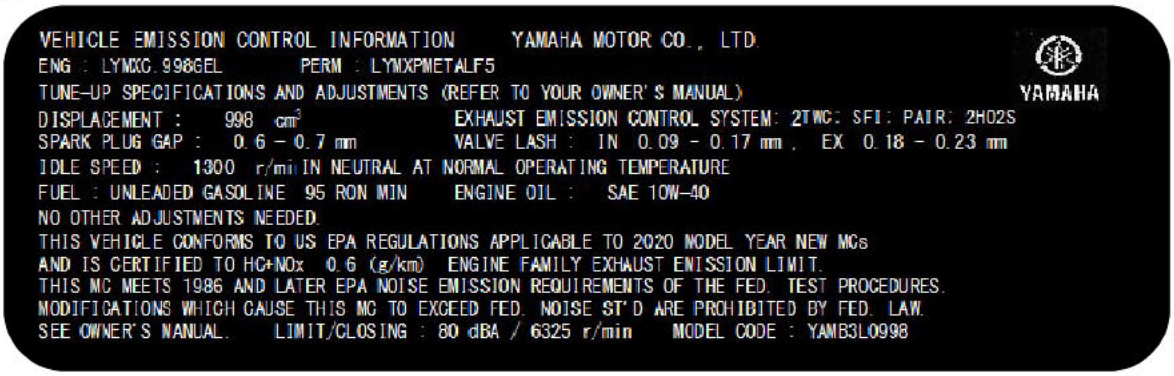
Engine Family: LYMXC.998GEL

Vehicle Emission Control Information Label

Label Location: Back surface of Air Filter Ass'y

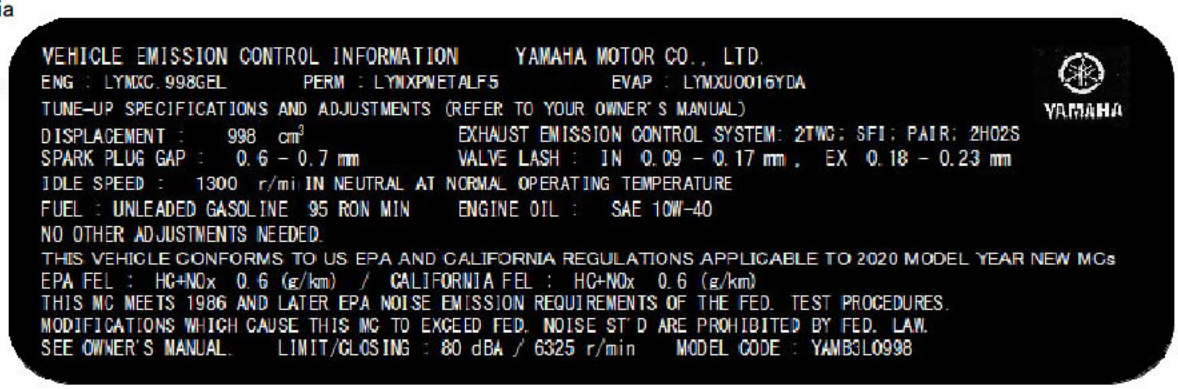
For 49 States

YZF1000;
YZF1000D



For California

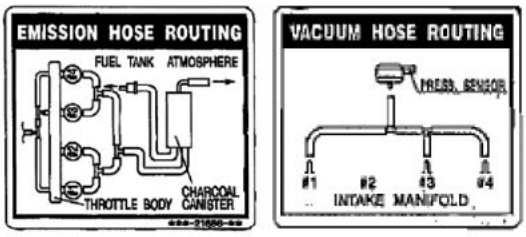
YZF1000C;
YZF1000DC



Vacuum Hose Routing Diagram Label Location:

Label Location: Back surface of Air Filter Ass'y

For California model only



The labels used are designed to withstand for the vehicle's total expected life, typical vehicle environmental conditions at the location where they have been attached.
The typical conditions include, but are not limited to, exposure to engine fuels, lubricants and coolants, engine operating temperatures, steam cleaning, and paints or paint solvents.

Model Year: 2020

Manufacturer Name: Yamaha Motor Co., Ltd.

Engine Family: LYMXC.998GEL

	EMISSION RELATED PART NUMBERS				
	49 States	California	MANUFACTURER		
Fuel System:					
Carb/Mixer Assembly					
Fuel Injector	B3L-13761-00 (x4) 14B-13761-10 (x4)	B3L-13761-00 (x4) 14B-13761-10 (x4)	BOSCH CORPORATION DENSO CORPORATION		
Fuel Pump	2CR-13907-00	2CR-13907-00	MITSUBISHI ELECTRIC CORPORATION		
ECM					
Pressure Regulator	2CR-13907-00 (F.Pump)	2CR-13907-00 (F/P)	MITSUBISHI ELECTRIC CORPORATION		
Oxygen Sensor	1WS-8592A-00 2CR-8592A-10	1WS-8592A-00 2CR-8592A-10	DENSO CORPORATION		
Other (Throttle Body)	B3L-13750-10	B3L-13750-20	MIKUNI CORPORATION		
Intake System					
Air Cleaner Element	B3L-14451-00	B3L-14451-00	YAMATO CO., LTD.		
Intake Manifold (Joint)	B3L-13635-00 B3L-13636-00	B3L-13635-00 B3L-13636-00	ARAI SEISAKUSHO CO., LTD.		
Turbocharger					
Supercharger					
Charge Air Cooler					
Other (Specify)					
Ignition System					
Spark Plug	NGK: LMAR9E-J	NGK: LMAR9E-J	NGK SPARK PLUG CO., LTD.		
Ignition Coil	2CR-82310-00 (x4)	2CR-82310-00 (x4)	MITSUBISHI ELECTRIC CORPORATION		
Ignition Control Valve Module					
Distributor					
Other (ECU)	B3L-8591A-10	B3L-8591A-10	DENSO CORPORATION		
EGR:					
EGR Valve Assembly					
Vacuum Control Valve					
Air Injection					
Control Valve (Reed Valve)	5SL-14890-00	5SL-14890-00	EAGLE INDUSTRY CO., LTD.		
Check Valve					
Solenoid Valve					
Aftertreatment System:					
Catalyst	B3L-14741-10	B3L-14741-10	CATALER CORPORATION		
Exhaust Manifold					
Crankcase System:					
PCV Valve					

YAMAHA MOTOR CO., LTD.

Engine Family: LYMXC.998GEL

CATALYTIC CONVERTER INFORMATION

a. Type/Number/Arrangement: TWC / 2 / Parallel

b. Location: Exhaust Pipe Ass'y (between Ex.Pipe and Muffler)

c. Catalyst Manufacturer: CATALER CORPORATION

d. Substrate:

(i) [redacted]
(ii) Construction: Honeycomb
(iii) [redacted]
(iv) Composition: Metallic

e. Active Material:

Composition: [redacted]

Loading [redacted]

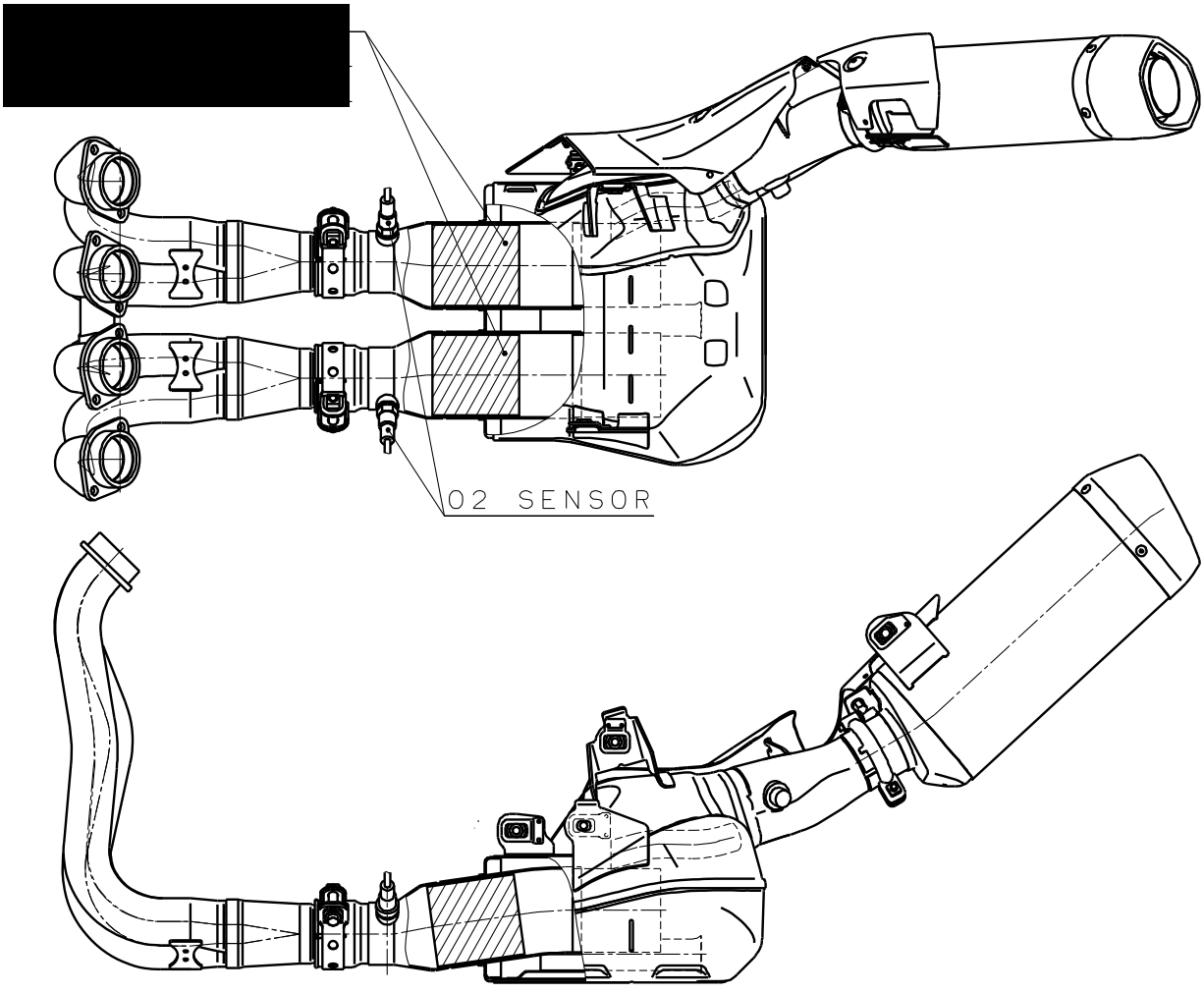
Total Grams per Catalyst; [redacted]

CONFIDENTIAL

YAMAHA MOTOR CO., LTD.

Engine Family: LYMXC.998GEL

Exhaust Pipe Ass'y



Test No.	20-N535-01	測定年月日 Test Date	2019 (Y) 2 (M) 20 (D)

計測責任者 Test Engineer : T. Tamura

車両試験データ
TEST READ OUT

Model	YZF1000DC	Drive	M.MAKI
Vehicle Id	JYARN67Y9LA000001	Operator	T.YOSHIYAMA

(D)

テストタイプ	3546km		
MIXTURE PRESSURE	2.90 kg/cm²		
走行時間 Test Time	開始(Start) 9:24	終了(Stop) 10:06	
全走行距離 Total Tet Distance	17.703 km		
天候 Weather	F		
大気圧 Atmosphere	101.0 kPa		

	Yct	Ys	Yht	Mean
DRY TEMP	297.9	299.4	297.3	298.2 K
WET TEMP	291.4	292.3	291.2	291.6 K
HUMIDITY	53.22	51.07	55.19	53.16 %
Tp	315.1	314.1	313.0	314.1 K
G1(=PP)	1	1	1	1.0 kPa

BAG			HC	CO	NO_x	CO_2	希釈ガス量 Vmix	走行距離 Test Distance
Yct	Sample (4)	測定値 Read Out	42.120 ppm	141.570 ppm	1.830 ppm	0.997 %	50.36	5.765
	Air (1)	測定値 Read Out	1.980 ppm	0.030 ppm	0.010 ppm	0.043 %	m^3	km
Ys	Sample (5)	測定値 Read Out	8.310 ppm	7.310 ppm	1.370 ppm	0.754 %	86.68	6.181
	Air (2)	測定値 Read Out	2.010 ppm	0.030 ppm	0.010 ppm	0.043 %	m^3	km
Yht	Sample (6)	測定値 Read Out	52.610 ppm	115.220 ppm	1.950 ppm	0.903 %	50.50	5.757
	Air (3)	測定値 Read Out	2.050 ppm	0.090 ppm	0.010 ppm	0.043 %	m^3	km

計算結果 Calculations	HC	CO	NO_x	CO_2	燃費(Fuel Economy)	
	0.139 g/km	0.683 g/km	0.034 g/km	164.601 g/km	32.53 mile/gal	13.83 km/l

No.

書類配布先

REMARKS

Test No.	20-N535-02	測定年月日 Test Date	2019 (Y) 3 (M) 12 (D)

計測責任者 Test Engineer : T. Tamura

車両試験データ
TEST READ OUT

Model	YZF1000DC	Drive	M.MAKI
Vehicle Id	JYARN67Y9LA000001	Operator	T.YOSHIYAMA

(D)

テストタイプ	7037km		
MIXTURE PRESSURE	2.90 kg/cm²		
走行時間 Test Time	開始(Start) 9:21	終了(Stop) 10:02	
全走行距離 Total Tet Distance	17.729 km		
天候 Weather	F		
大気圧 Atmosphere	100.5 kPa		

	Yct	Ys	Yht	Mean
DRY TEMP	297.2	299.1	297.4	297.9 K
WET TEMP	291.2	292.1	291.3	291.5 K
HUMIDITY	55.81	51.43	55.35	54.20 %
Tp	315.3	314.2	313.2	314.2 K
G1(=PP)	1	1	1	1.0 kPa

BAG			HC	CO	NO_x	CO_2	希釈ガス量 Vmix	走行距離 Test Distance
Yct	Sample (4)	測定値 Read Out	47.470 ppm	160.750 ppm	1.800 ppm	0.958 %	50.09 m^3	5.760 km
	Air (1)	測定値 Read Out	2.270 ppm	0.410 ppm	0.010 ppm	0.043 %		
Ys	Sample (5)	測定値 Read Out	15.190 ppm	21.640 ppm	1.280 ppm	0.726 %	86.24 m^3	6.209 km
	Air (2)	測定値 Read Out	2.210 ppm	0.390 ppm	0.010 ppm	0.043 %		
Yht	Sample (6)	測定値 Read Out	56.560 ppm	130.760 ppm	1.920 ppm	0.870 %	50.24 m^3	5.760 km
	Air (3)	測定値 Read Out	2.410 ppm	0.420 ppm	0.010 ppm	0.043 %		

計算結果 Calculations	HC	CO	NO_x	CO_2	燃費(Fuel Economy)	
	0.176 g/km	0.877 g/km	0.032 g/km	156.937 g/km	34.02 mile/gal	14.46 km/l

No.

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REMARKS

Test No.	20-N535-03	測定年月日 Test Date	2019 (Y) 3 (M) 14 (D)

計測責任者 Test Engineer : T. Tamura

車両試験データ
TEST READ OUT

Model	YZF1000DC	Drive	M.MAKI
Vehicle Id	JYARN67Y9LA000001	Operator	T.YOSHIYAMA

(D)

テストタイプ	7067km		
MIXTURE PRESSURE	2.90 kg/cm²		
走行時間 Test Time	開始(Start) 9:23	終了(Stop) 10:04	
全走行距離 Total Tst Distance	17.709 km		
天候 Weather	F		
大気圧 Atmosphere	101.8 kPa		

	Yct	Ys	Yht	Mean	
DRY TEMP	296.9	299.3	297.4	297.9	K
WET TEMP	291.2	292.1	291.0	291.4	K
HUMIDITY	57.34	50.25	53.23	53.60	%
Tp	315.4	314.2	313.3	314.3	K
G1(=PP)	1	1	1	1.0	kPa

BAG			HC	CO	NO_x	CO_2	希釈ガス量 Vmix	走行距離 Test Distance
Yct	Sample (4)	測定値 Read Out	49.090 ppm	175.980 ppm	1.770 ppm	0.956 %	50.68 m^3	5.757 km
	Air (1)	測定値 Read Out	2.410 ppm	0.290 ppm	0.010 ppm	0.045 %		
Ys	Sample (5)	測定値 Read Out	16.640 ppm	24.570 ppm	1.350 ppm	0.723 %	87.29 m^3	6.185 km
	Air (2)	測定値 Read Out	2.190 ppm	0.310 ppm	0.010 ppm	0.044 %		
Yht	Sample (6)	測定値 Read Out	59.510 ppm	139.700 ppm	2.030 ppm	0.870 %	50.86 m^3	5.767 km
	Air (3)	測定値 Read Out	2.180 ppm	0.290 ppm	0.010 ppm	0.043 %		

計算結果 Calculations	HC	CO	NO_x	CO_2	燃費(Fuel Economy)	
	0.191 g/km	0.973 g/km	0.034 g/km	158.469 g/km	33.64 mile/gal	14.30 km/l

No.

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REMARKS

Test No.	20-N535-04	測定年月日 Test Date	2019 (Y) 4 (M) 12 (D)

計測責任者 Test Engineer : T. Tamura

車両試験データ
TEST READ OUT

Model	YZF1000DC	Drive	M.MAKI
Vehicle Id	JYARN67Y9LA000001	Operator	T.YOSHIYAMA

(D)

テストタイプ	13046km		
MIXTURE PRESSURE	2.90		kg/cm²
走行時間 Test Time	開始(Start) 13:28	終了(Stop)	14:09
全走行距離 Total Tet Distance	17.729		km
天候 Weather	C		
大気圧 Atmosphere	101.2		kPa

	Yct	Ys	Yht	Mean
DRY TEMP	297.6	299.1	297.2	298.0 K
WET TEMP	291.2	292.0	291.1	291.4 K
HUMIDITY	53.52	50.72	55.06	53.10 %
Tp	318.7	314.7	313.2	315.5 K
G1(=PP)	1	1	1	1.0 kPa

BAG			HC	CO	NO_x	CO_2	希釈ガス量 Vmix	走行距離 Test Distance
Yct	Sample (4)	測定値 Read Out	48.650 ppm	177.680 ppm	1.800 ppm	0.957 %	50.23	5.765
	Air (1)	測定値 Read Out	2.490 ppm	0.010 ppm	0.010 ppm	0.044 %	m^3	km
Ys	Sample (5)	測定値 Read Out	14.330 ppm	17.220 ppm	1.420 ppm	0.727 %	86.72	6.197
	Air (2)	測定値 Read Out	2.510 ppm	0.040 ppm	0.010 ppm	0.044 %	m^3	km
Yht	Sample (6)	測定値 Read Out	54.780 ppm	117.490 ppm	2.350 ppm	0.876 %	50.56	5.767
	Air (3)	測定値 Read Out	2.600 ppm	0.030 ppm	0.010 ppm	0.046 %	m^3	km

計算結果 Calculations	HC	CO	NO_x	CO_2	燃費(Fuel Economy)	
	0.171 g/km	0.848 g/km	0.036 g/km	157.919 g/km	33.83 mile/gal	14.38 km/l

No.

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REMARKS

Test No.	20-N535-05	測定年月日 Test Date	2019 (Y) 4 (M) 16 (D)

計測責任者 Test Engineer : T. Tamura

車両試験データ
TEST READ OUT

Model	YZF1000DC	Drive	M.MAKI
Vehicle Id	JYARN67Y9LA000001	Operator	T.YOSHIYAMA

(D)

テストタイプ	13076km		
MIXTURE PRESSURE	2.90 kg/cm²		
走行時間 Test Time	開始(Start) 9:14	終了(Stop) 9:55	
全走行距離 Total Tet Distance	17.739 km		
天候 Weather	F		
大気圧 Atmosphere	101.7 kPa		

	Yct	Ys	Yht	Mean
DRY TEMP	297.2	299.5	297.4	298.0 K
WET TEMP	291.2	292.2	291.1	291.5 K
HUMIDITY	55.65	49.87	53.89	53.14 %
Tp	315.3	314.2	313.1	314.2 K
G1(=PP)	1	1	1	1.0 kPa

BAG			HC	CO	NO_x	CO_2	希釈ガス量 Vmix	走行距離 Test Distance
Yct	Sample (4)	測定値 Read Out	40.170 ppm	172.890 ppm	2.050 ppm	0.979 %	50.65	5.765
	Air (1)	測定値 Read Out	2.410 ppm	0.040 ppm	0.020 ppm	0.044 %	m^3	km
Ys	Sample (5)	測定値 Read Out	11.040 ppm	14.900 ppm	1.560 ppm	0.738 %	87.24	6.213
	Air (2)	測定値 Read Out	2.400 ppm	0.050 ppm	0.010 ppm	0.043 %	m^3	km
Yht	Sample (6)	測定値 Read Out	52.370 ppm	120.070 ppm	2.290 ppm	0.881 %	50.86	5.761
	Air (3)	測定値 Read Out	2.430 ppm	0.150 ppm	0.010 ppm	0.041 %	m^3	km

計算結果 Calculations	HC	CO	NO_x	CO_2	燃費(Fuel Economy)	
	0.147 g/km	0.830 g/km	0.039 g/km	161.528 g/km	33.10 mile/gal	14.07 km/l

No.

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REMARKS

Test No.	20-N535-06	測定年月日 Test Date	2019 (Y) 5 (M) 10 (D)

計測責任者 Test Engineer : T. Tamura

車両試験データ
TEST READ OUT

Model	YZF1000DC	Drive	M.MAKI
Vehicle Id	JYARN67Y9LA000001	Operator	T.YOSHIYAMA

(D)

テストタイプ	15018km		
MIXTURE PRESSURE	2.90 kg/cm²		
走行時間 Test Time	開始(Start) 9:22	終了(Stop) 10:04	
全走行距離 Total Tet Distance	17.778 km		
天候 Weather	F		
大気圧 Atmosphere	101.0 kPa		

	Yct	Ys	Yht	Mean
DRY TEMP	297.8	299.3	297.2	298.1 K
WET TEMP	291.5	292.3	290.9	291.6 K
HUMIDITY	54.40	51.57	53.78	53.25 %
Tp	315.8	314.1	313.0	314.3 K
G1(=PP)	1	1	1	1.0 kPa

BAG			HC	CO	NO_x	CO_2	希釈ガス量 Vmix	走行距離 Test Distance
Yct	Sample (4)	測定値 Read Out	46.360 ppm	190.120 ppm	1.930 ppm	0.974 %	50.39 m^3	5.789 km
	Air (1)	測定値 Read Out	2.360 ppm	0.020 ppm	0.010 ppm	0.043 %		
Ys	Sample (5)	測定値 Read Out	14.360 ppm	24.900 ppm	1.510 ppm	0.733 %	86.84 m^3	6.214 km
	Air (2)	測定値 Read Out	2.440 ppm	0.020 ppm	0.003 ppm	0.043 %		
Yht	Sample (6)	測定値 Read Out	55.760 ppm	147.800 ppm	2.350 ppm	0.888 %	50.59 m^3	5.775 km
	Air (3)	測定値 Read Out	2.480 ppm	0.110 ppm	0.010 ppm	0.043 %		

計算結果 Calculations	HC	CO	NO_x	CO_2	燃費(Fuel Economy)	
	0.170 g/km	1.023 g/km	0.038 g/km	159.912 g/km	33.35 mile/gal	14.18 km/l

No.

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REMARKS

<Exhaust Emission Test Results>

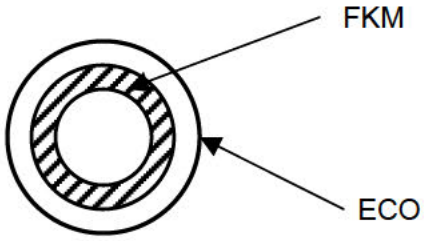
ON-MC

Model Year	2020	Model Name	YZF1000DC	Engine Displacement Class	Ⅲ	U.L.	30000 km
Engine Family	LYMXC.998GEL	VIN	JYARN67Y9LA000001	Ex. Emission Control Device		AI+FI+CAT	
Displacement	998 cm^3	Engine Code	N535	Crank Case Emission Control System		Sealed Type	
Transmission	MT-6	Evap. Family	LYMXU0016YDA	Evap. Control Device		Charcoal	
Test Inertia Mass	300 kg	S.A.	1/2	Rr. Tire Pressure		290 kPa	

JOB	DATE	TEST No.	Tested at (km)	AMBNT. TEMP. (℃)	HC g/km	NOx g/km	CO g/km	HC+NOx g/km
3500 km MINIMUM TES	2/20/19	20-N535-01	3546					
7000 km BEFORE MAINTNANCE	3/12/19	20-N535-02	7037					
MAINTENANCE (1)								
7000 km AFTER MAINTENANCE	3/14/19	20-N535-03	7067					
13000 km BEFORE MAINTNANCE	4/12/19	20-N535-04	13046					
MAINTENANCE (2)								
13000 km AFTER MAINTENANCE	4/16/19	20-N535-05	13076					
15000 km TOTAL	5/10/19	20-N535-06	15018					
Regression Line								
Deterioration Factor								
Official Test Results								
Certification Levels								

Fuel Line Permeation Test Report

1.	Vehicle Manufacturer:	YAMAHA MOTOR CO., LTD.
2.	Fuel Hose Manufacturer:	KOKOKU INTECH CO., LTD.
3.	Fuel Hose Identification	K2001
4.	Test Fuel Hose Inner Diameter:	7.0 mm
5.	Test Fuel hose Inner Area:	6594 mm^2 (= 300mm x π x 7.0mm)
6.	Material:	FKM/ECO



7.	Minimum Thickness:	4.0 mm
8.	Test Method:	SAE J30
9.	Fuel:	CE10
10.	Permeation Rate:	11.136 $g/m^2/day$
11.	Certification Level:	11.1 $g/m^2/day$

Test Results

1. Pre-Soak: 4 weeks at 23 ℃

   Test Period 2006/10/30-2006/11/28

2. Permeation Test: 14 days at 23 ℃

   Test Period 2006/11/29-2006/12/12

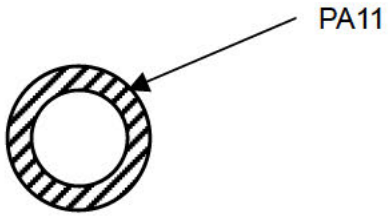
Day	Permeation Rate $g/m^2/day$
29-Nov-06	10.91
30-Nov-06	12.97
01-Dec-06	12.23
02-Dec-06	10.76
03-Dec-06	10.76
04-Dec-06	8.99
05-Dec-06	11.64
06-Dec-06	11.94
07-Dec-06	10.46
08-Dec-06	8.70
09-Dec-06	10.76
10-Dec-06	11.64
11-Dec-06	12.08
12-Dec-06	12.08

Average Permeation Rate:

= 11.136 $g/m^2/day$

Fuel Line Permeation Test Report

1.	Vehicle Manufacturer:	YAMAHA MOTOR CO., LTD.
2.	Fuel Hose Manufacturer:	MEIJI FLOW SYSTEMS CO., LTD.
3.	Fuel Hose Identification	M1001
4.	Test Fuel Hose Inner Diameter:	6.0mm
5.	Test Fuel hose Inner Area:	5652 mm^2 (= 300mm x π x 6.0mm)
6.	Material:	PA11



7.	Minimum Thickness:	1.0 mm
8.	Test Method:	SAE J30
9.	Fuel:	CE10
10.	Permeation Rate:	10.87 g/m^2/day
11.	Certification Level:	10.9 g/m^2/day

Test Results

1.	Pre-Soak:	4 weeks at 23 ℃
	Test Period	2004/11/15-2004/12/13
2.	Permeation Test:	14 days at 23 ℃
	Test Period	2004/12/14-2004/12/27

Day	Permeation Rate g/m²/day
14-Dec-04	10.62
15-Dec-04	10.62
16-Dec-04	10.62
17-Dec-04	10.62
18-Dec-04	10.62
19-Dec-04	12.39
20-Dec-04	10.62
21-Dec-04	12.39
22-Dec-04	10.62
23-Dec-04	10.62
24-Dec-04	10.62
25-Dec-04	10.62
26-Dec-04	10.62
27-Dec-04	10.62

Average Permeation Rate:

= 10.87 g/m^2/day

Periodic maintenance and adjustment

EAU48491

TIP

- From 24000 mi (37000 km) or 36 months, repeat the maintenance intervals starting from 8000 mi (13000 km) or 12 months.
- Items marked with an asterisk require special tools, data and technical skills, have a Yamaha dealer perform the service.

EAU17932

Periodic maintenance chart for the emission control system

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
1	*	Fuel line	• Check fuel hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
2	*	Spark plugs	• Check condition. • Adjust gap and clean.		√		√		√
			• Replace.			√		√	
3	*	Valve clearance	• Check and adjust valve clearance when engine is cold.	Every 26600 mi (42000 km)					
4	*	Crankcase breather system	• Check breather hose for cracks or damage. • Replace if necessary.		√	√	√	√	√
5	*	Fuel injection	• Adjust synchronization.	√	√	√	√	√	√
6	*	Exhaust system	• Check for leakage. • Tighten if necessary. • Replace gasket(s) if necessary.		√	√	√	√	√

8

Periodic maintenance and adjustment

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
7	*	Evaporative emission control system (for California only)	• Check control system for damage. • Replace if necessary.				√		√
8	*	Air induction system	• Check the air cut-off valve, reed valve, and hose for damage. • Replace any damaged parts if necessary.				√		√

YAMAHA MOTOR CORPORATION, U.S.A.
2015 AND LATER MODEL STREET & DUAL-PURPOSE MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants that each new Yamaha motorcycle purchased from an authorized Yamaha motorcycle dealer in the continental United States will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations.

THE PERIOD OF WARRANTY for Yamaha motorcycles originally equipped with headlight, stoplight, and turn signals shall be one (1) year from the date of purchase, with no mileage limitation, except for the battery, which is warranted for thirty (30) days from the date of purchase.

MODELS EXCLUDED FROM WARRANTY include those used for non-Yamaha-authorized renting, leasing, or other commercial purposes.

DURING THE PERIOD OF WARRANTY any authorized Yamaha motorcycle dealer will, free of charge, repair or replace, at Yamaha's option, any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the product's warranty period. All parts replaced under warranty become the property of Yamaha Motor Corporation, U.S.A.

GENERAL EXCLUSIONS from this warranty shall include any failures caused by:

a. Competition or racing use.
b. Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
c. Abnormal strain, neglect, or abuse.
d. Lack of proper maintenance and off-season storage as described in the Owner's Manual.
e. Accident or collision damage.
f. Modification to original parts.
g. Damage due to improper transportation

SPECIFIC EXCLUSIONS from this warranty shall include parts replaced due to normal wear or routine maintenance.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:

1. Operate and maintain the motorcycle as specified in the appropriate Owner's Manual, and
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

WARRANTY TRANSFER: To transfer the warranty from the original purchaser to any subsequent purchaser, it is imperative that the machine be inspected and registered for warranty by an authorized Yamaha motorcycle dealer. In order for this warranty to remain in effect, this inspection and registration must take place within ten (10) days after transfer. A reasonable dealer-imposed fee may be charged for the inspection.

EMISSIONS CONTROL SYSTEM WARRANTY
Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each Yamaha motorcycle covered by this warranty that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the periods listed immediately below. Failures other than those resulting from defects in material or workmanship which arise solely as a result of owner abuse and/or lack of proper maintenance are not covered by this warranty.

ENGINE DISPLACEMENT	PERIOD
Under 50cc	6,000 km (3,750 miles) or five years, whichever occurs first
50cc to 169cc	12,000 km (7,465 miles) or five years, whichever occurs first
170cc to 279cc	18,000 km (11,185 miles) or five years, whichever occurs first
280cc or over	30,000 km (18,641 miles) or five years, whichever occurs first

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

LIT-11790-21-15
15-550
Rev. 6/14

YAMAHA MOTOR CORPORATION, U.S.A.
Post Office Box 6555
Cypress, California 90630
1-800-962-7926

EPA

CONFIDENTIAL BUSINESS INFORMATION

Yamaha Motor Co., Ltd.
Certification Plan and Estimated Production Volumes
**** 2020 Model Year**
49 States Motorcycles
Class III (Useful Life 30000km)

	Engine Family	Estimated Production Volume (unit) (1)	Manufacturer's Designated HC+Nox Level (g/km) (2)	(1) × (2)
1	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]

ESTIMATED CORPORATE AVERAGE = (1)×(2) / (1) = [redacted]*

↑ OK

* Revision

** [redacted]

Issue Date: [redacted]

Revision Date: [redacted]

MODEL NAME ON INVOICE, BOX & C.O.C.	ENGINE FAMILY NAME	FEATURE BREAKDOWN →	Model	Type a	Type b	Year	CA/U49	Color
YZFR1LL	KYMXC.998GEJ	YZFR1LL	YZFR1			L		L
YZFR1LB		YZFR1LB	YZFR1			L		B
YZFR1LCL		YZFR1LCL	YZFR1			L	C	L
YZFR1LCB		YZFR1LCB	YZFR1			L	C	B
YZFR1ML		YZFR1ML	YZFR1	M		L		
YZFR1MLC		YZFR1MLC	YZFR1	M		L	C	

Type code description

M: Moto GP Inspired

K: Model Year 2019

L: Model Year 2020

C: California Model

Colors:

L: Blue

B: Black

Yamaha Vehicle Identification Number Decoding

VIN Digit Position	Coding
1,2,3	World Mfr. ID (WMI)
4	Category Code (Table 1)
5	Displacement Code (Table 2)
6,7	Yamaha Model ID
8	E = 49 State Model Y = CA or 50 State Model 3 or C = CARB Red Sticker
9	Check Digit (NHTSA Calculation)
10	Model Year: **L = 2020** Assembly
11	Plant (Table 3)
12-17	Sequential Production #

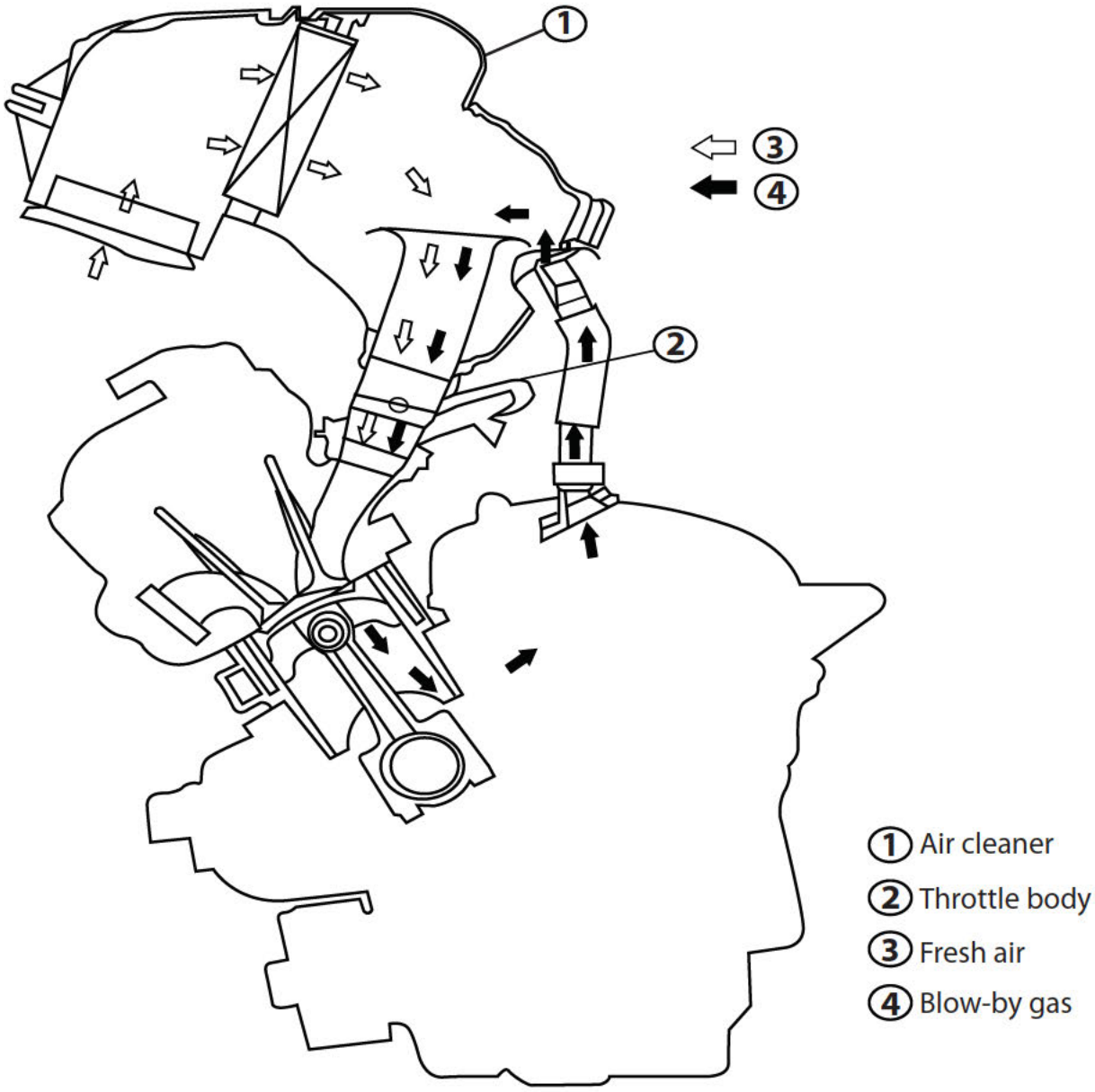
Table 1
S = Scooter
R = Sport Bike
V = V-Twin Engine
D = Dual Purpose
A = ATV & SxS
C = Off Road Motorcycle

Table 2
A = up to 50cc
B = 51 to 100cc
E = 101 to 125cc
G = 126 to 250cc
H = 251 to 400cc
J = 401 to 600cc
M = 601 to 750cc
N = 751 - 1000cc
P = 1001cc and up

Table 3
ATV & SxS: A = YMMC (USA)
ATV (Small) T = Aeon (Taiwan)
Off Road Motorcycle TTR50: 0 = CJYM (China)
Off Road Motorcycle TTR125/230: 0 = YMDA (Brazil)
Highway Motorcycle A = YMC (Japan)
Highway Motorcycle K = Yamaha Indonesia
Scooter (50cc - 123cc) A = YMT (Taiwan)

Crankcase Breather Operation

Fuel Injected Models



Crankcase gases (black arrows) are developed due to engine operation. A spigot either in the crankcase or cylinder head is attached to a rubber hose.

The rubber hose is attached to the engine air cleaner. As the engine pulls air (white arrows) through the air cleaner, the crankcase gases are also pulled from the crankcase into the airbox.

Fresh air and crankcase gases are then pulled together through the intake track. During the combustion process, the crankcase gases are burned.

S08. AUXILIARY EMISSION CONTROL DEVICES

Model Year: [redacted]
Manufacturer Name: [redacted]
Engine Family: [redacted]

TABLE A: Sensed Parameters versus Controlled Parameters*

[redacted]	[redacted]	[redacted] N[redacted]	Control Parameters				
			[redacted]				
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

* The AECDs (and all other components) used in this engine family are fully compliant with the defeat device prohibitions in 40 CFR 86.409-78.

In accordance with the provisions of Title 17, California Code of Regulations, sections 91000 to 91022, and the California Public Records Act (Government Code Sections 6250 et seq.), Yamaha declares this AECD information submitted as a requirement by the California Air Resources is confidential "trade secret" information, and requests that it be protected as such from public disclosure.

Model Year	**2020**
Manufacturer Name	**YAMAHA MOTOR CO., LTD.**
Engine Family	**LYMXC.998GEL**

TABLE B: Justifications for AECDs*

[redacted]	[redacted]	[redacted]			[redacted]		[redacted]	[redacted]	[redacted]
		Sensed parameter	**Entry condition**	**Exit condition**	**Actuator**	**Action**			
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]					
		[redacted]	[redacted]	[redacted]					
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]					
		[redacted]	[redacted]	[redacted]					
[redacted]	[redacted]	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]						

[redacted]

AECD Supplementary Information

Model Year: [redacted]20
Manufacturer Name: YAMAHA MOTOR CO., LTD.
Engine Family: LYMXC.998GEL

[redacted]

[redacted]

λ [redacted]

[redacted]

Factor of increase in injected fuel vs [redacted] Engine speed vs. water temp

[redacted]

[redacted]

[redacted]